SYSTEM TRAINING PLAN
(RCS ATTG-55)

FOR

MEDIUM EXTENDED AIR DEFENSE SYSTEM

(MEADS)
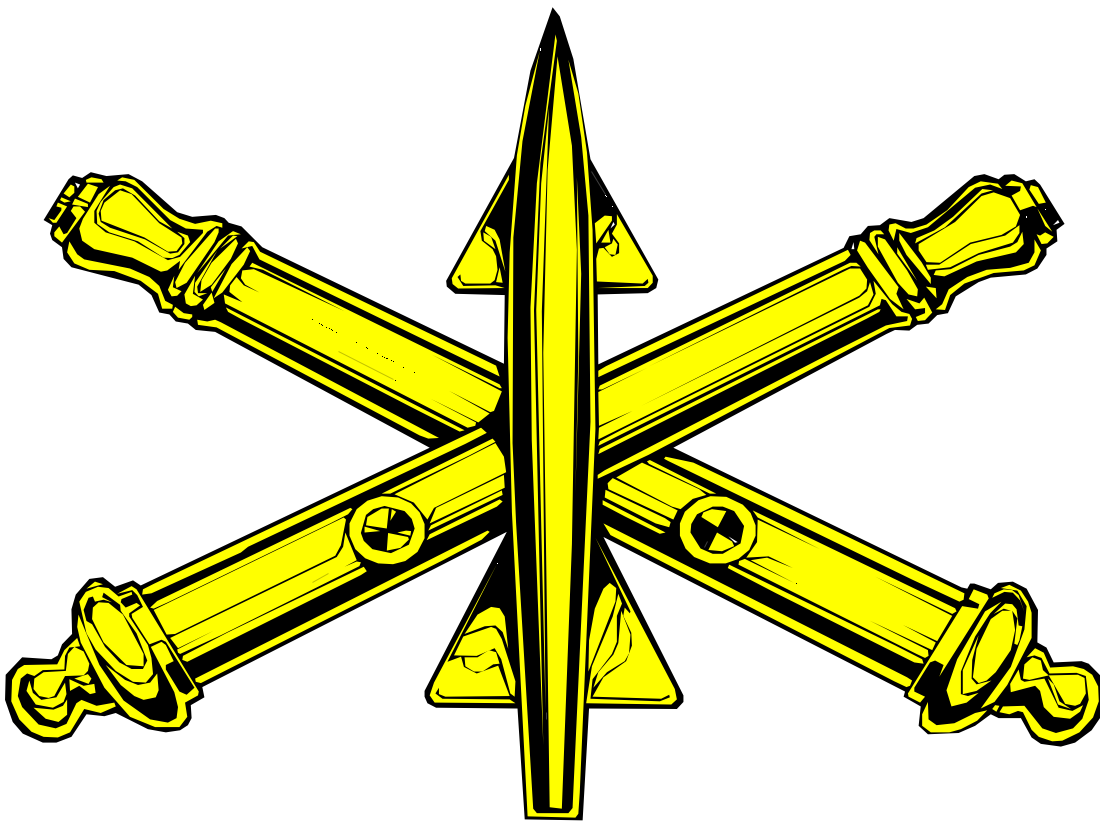
SYSTEM TRAINING PLAN

FOR

MEADS

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SYSTEM TRAINING PLAN

FOR

MEDIUM EXTENDED AIR DEFENSE (MEAD) SYSTEM

1. SYSTEM DESCRIPTION

a. Narrative

The MEAD system is a major new system start consisting of integrated, netted, distributed, and replicated components capable of providing Corps air defense. The MEAD system will counter/defeat/destroy Theater Missiles (TMs) defined in JP 3-01.5 as Tactical Air to Surface Missiles (TASMs), Cruise Missiles (CMs), and Theater Ballistic Missiles (TBMs) and also Air Breathing Threats (ABTs) described as Unmanned Aerial Vehicles/Remotely Piloted Vehicles (UAVs/RPVs), Fixed and Rotary-wing aircraft primarily targeted against a US Army Corps. The MEAD system will consist of Battle Management/Command, Control, Communications, Computers and Intelligence (BM/C^{4}I) elements, Ground Based Sensors, Launchers, Missiles, Government Furnished Equipment (GFE), and associated support equipment.

b. First Unit Equipped (FUE)

Date: 2005

2. TARGET AUDIENCE

The proposed target audience for MEAD system is to come from existing Army MOS's. Air Defense officers, Warrant officers, and Enlisted personnel will man the MEAD system. The USAADASCH will establish a training base to support the MEAD system institutional training. Changes to the target audience if required will be identified as data and information matures. The following is a list of MOSs possibly impacted by the fielding of MEAD system:

- 14E   Patriot Fire Control Enhanced Operator Maintainer

- 14J   ADA C^{4}I TOC Enhanced Operator Maintainer

- 14T   Patriot Launching Station Enhanced Operator Maintainer

- 31F   Network-Switching System Operator Maintainer

- 52D   Power Generator Equipment Repairer

- 14E   Air Defense Artillery Officer, Patriot Weapons System

- 140E   Patriot Systems Technician

3. ASSUMPTIONS

- The MEAD system maintenance concept, for MEAD system peculiar equipment, will have two (2) maintenance levels: Unit (Operator Maintainer) and Depot (Repairer).

- The quality, aptitude and skill requirements of the target audience will not increase over that of the Patriot Missile System target audience.

- The MEAD system will be designed with Embedded Training (ET) subsystems that support all training categories when tactically deployed.

- The MEAD system will use the Department of Defense (DoD) High Level Architecture (HLA) as the common technical framework to ensure MEADS can interoperate with Army Battle Command System (ABCS) C^4I systems, weapons simulators, and battle simulation systems for training and mission rehearsal.

- Training development resources, manpower, equipment will be available to support MEAD system training and training development over the life cycle of the system.

- MEAD system associated Training Aids, Devices, Simulators, and Simulations (TADSS) will be provided to the units concurrent with system fielding schedules per the CSA directives.

- Materiel Developer will provide required training equipment and Instructor and Key Personnel (I&KP) Training prior to resident training start date.

- The materiel developer will develop the New Equipment Training Plan (NETP).

- Personnel for manning the MEAD system will come from existing U S Army force structure.

- Training literature and publications will be provided in sufficient quantities and within appropriate time frames.

- The MEAD system is being developed as a multinational venture and will have impacts concerning materiel, logistics and training.

4. TRAINING CONSTRAINTS

The training constraints for the MEAD system are as follows:

- Training for the MEAD system will be developed in accordance with TRADOC Regulation 350-70 <u>Training Development Management, Processes, and Products</u>, and within the framework of the materiel acquisition process (DOD 5000.2-R).

- Personnel resources required for US MEAD system training must come from Department of the Army (DA) resources. The training equipment, components, and devices must be provided in sufficient quantities and within the appropriate time frames to support operational testing and system fielding. Required resources and facilities defined in the System Training Plan (STRAP) will be funded and/or provided by the Training and Doctrine Command (TRADOC)/MEAD system National Project Office.

- Currently, there is no NETP for the MEAD system.

5. TRAINING CONCEPT (AC/RC)

The focus of the training concept for MEAD system is to identify the individual and collective tasks, and the training required, supporting mission execution at each echelon by duty position (operator, maintainer, staff, and commander). The MEAD system specific Embedded Training (ET) capabilities and training devices will be the primary means used to train operator maintainers and crews to perform Force Operations (FO), Engagement Operations (EO), Battle Management/Command, Control, Communications, Computers and Intelligence (BMC^{4}I), and organizational maintenance tasks at the institution. Tactical equipment with embedded capability, Training Aids, Devices, Simulators, and Simulations (TADSS) and the Training Support Package (TSP) will be the principal source for sustainment training. TRADOC schools will be provided a sufficient number of tactical systems to establish a training base to support the fielded units with replacement personnel. The operational chain of command will be provided exportable training support packages that are timely, complete, accurate, effective and easy to implement.

The materiel developer will ensure that the training programs for the MEAD system developed by contractor personnel will be in accordance with TRADOC Regulation 350-70, <u>Training Development Management, Processes, and Products</u>, and within the framework of the Materiel Acquisition Process. This concept visualizes an integrated training subsystem supporting the MEAD system deployment for both the Active and Reserve Components. The materiel developer, with active participation by TRADOC user representatives, will require the contractor to develop and/or update this training subsystem. This subsystem will include but, is not limited to individual and collective task analysis, the embedded training system, Instructor and Key Personnel Training, Staff Planners Course, TADSS and New Equipment Training (NET). The training subsystem will support NET and unit sustainment training. It will be developed

using the Systems Approach to Training (SAT) process and applying the concepts of Distance Learning. This training subsystem will be developed concurrently with the system hardware and software, validated during Initial Operational Test and Evaluation (IOTE), and will be in place when fielding begins. Service schools other than USAADASCH may be affected by the fielding of MEAD system. Training products and devices will be operated in an environment typically found in both the institution and unit. The MEAD system Officers, Warrant Officers, Operator Maintainers and Repairers courses will utilize these devices and products.

The MEAD system will support the Combined Arms Training Strategy (CATS) of three (3) mutually supporting pillars of training: Unit, Institution, and Self-Development. CATS provides direction on how the unit trains and identifies the best mix of training resources to actually accomplish the training. The strategy integrates Gunnery, Maneuver Exercises, and Soldier Training, into battle-focused training plans. It's not a rigid process that limits the leader but provides the leader with a menu of training events and resources from which he can plan and manage training to ensure soldiers and units are qualified.

The training of soldiers, leaders, and units should be tough, realistic, and intellectually and physically challenging. It excites, motivates, and develops competence and confidence and capitalizes on technology by using an array of TADSS that provide the best training efficiency (low cost) and training effectiveness (promotes learning). Actual equipment is used to validate the transfer of learning from device to the actual equipment.

6. TRAINING STRATEGY (AC/RC)

a. NET Strategy

The New Equipment Training (NET) strategy is based on AR 350-35, Army Modernization Training. NET requirements are the responsibility of the MEAD system materiel developer and will be coordinated with USAADASCH and other service schools. NET planners will consider exportable Interactive Multimedia Instruction (IMI), distance learning, train-the-trainer, institutional training, single-site training, contract NET teams, and, if cost effective and affordable, Army staffed NET teams. NET development will, as a minimum, include a NET TSP that includes a multimedia in addition to POI's, lesson plans, technical manuals, student and instructor guides, and a course management plan. The TSP will include a tutorial "how to" module that permits identification of soldier training proficiency by module. The New Equipment Training Plan (NETP) will include a Doctrine and Tactics Training (DTT) TSP that with other products, will support both NET and sustainment training. The MEAD system equipment and training subsystems and all devices and products must be available for NET. NET is planned and monitored by USAADASCH, incrementally by battery, for an entire battalion. Multiple iterations of NET courses will be required. The following NET courses are required:

- Staff Planners Course. The staff planners course is program oriented. Its intended to familiarize planners with the development and conduct of Early Users Test and Experimentation (EUT&E).

- Test Players Training. This course is technical in nature and system (equipment) rather than program oriented. It is performance oriented and criterion referenced training. A stand-alone training course is required for each MOS. It will as a minimum contain lessons, modules, or units common to other MOS. Test Players Training is focused on achieving a given level of performance based on some predetermined criteria. Contractors will provide training to personnel who will participate in all required development and test functions.

- Instructor and Key Personnel (I&KP) Course. This course is designed to train TRADOC instructors, New Equipment Training Team (NETT) members, and other key personnel in the training base. Training will be scheduled in such a manner that I&KP are capable of training personnel and still maintain stability and continuity within the training base. The I&KP training package will be validated prior to the first presentation of I&KP training. The validation by USAADASCH will be based on performance testing and testing of a representative sample of the target audience. Personnel having completed the I&KP course will be stabilized in the institution to ensure availability of qualified personnel to train units and to establish the MEAD system training base.

- New Materiel Introductory Briefing Team (NMIBT). This NET consists of a training package and/or briefing team. This NET will provide the gaining commanders and their staffs with all essential information needed to facilitate fielding of MEAD system. Doctrine and Tactics Training (DTT) will be an integral part of NMIBT.

- New Equipment Training Team (NETT). NETTs may be used to provide training to units converting to MEAD system. Training will be conducted at locations designated by the gaining MACOM. The training is technical in nature, performance oriented, criterion referenced and will address all critical tasks. A separate training course for each MOS is required; however, it may contain lessons, modules or units common to other MOS. At the conclusion of training, the skills, and knowledge necessary to operate, maintain, and employ the MEAD system will have been transferred to the gaining unit personnel. The training presented during NET is the same as, or similar to, the training to be provided at the institution.

- Reserve Component training will be accomplished in accordance with the USAADASCH Reserve Component (RC) Training Strategy

b. Institutional Training Strategy (WARRIOR)

The institutional training strategy will conform to approved training methods. The institutional training strategy is envisioned to support development of possible new

MOS's and be conducted at service schools. The MEAD system training base will use state-of-the-art capabilities and media to provide efficiencies in cost and time. Media selected for implementation will be based on in-depth analysis of operational needs.

Institutional training for the MEAD system will be based on results of System MANPRINT Management Plan (SMMP) Issues and Concerns, Early Comparability Analysis (ECA), Training Impact Analysis (TIA), Cost and Training Effectiveness Analysis (CTEA), Early User Test and Experimentation (EUT&E) and Initial Operational Test and Evaluation (IOTE). Appropriate existing or new officer, warrant officer, noncommissioned officer, and enlisted courses will be modified or created to incorporate necessary instruction on doctrinal, tactical, logistics, operational, and repair subject matter. DTT will be taught to operators through senior commanders and address the need for battle drills and situational training exercises which embody the "how to fight" doctrine. USAADASCH will manage the conduct of a MEAD system TIA that will provide the initial analytical support for training development activities. Possible institutional training courses that will be affected by the fielding of MEAD system are:

- Advanced Individual Training (AIT). USAADASCH will perform needs analyses to determine the training requirements and impacts. USAADASCH AIT institutional training requirements are TBD.

- Basic Noncommissioned Officer Course (BNCOC). USAADASCH will perform needs analyses to determine to what degree MEAD system training will be integrated into the BNCOC branch/specialty portion. Analyses will address the training requirements of all MEAD system subordinate systems to ensure that attendees of the BNCOC receive appropriate instruction. USAADASCH BNCOC institutional training requirements are TBD.

- Advanced Noncommissioned Officer Course (ANCOC). ANCOC Common Core and branch/specialty portion. Analyses will address the training requirements of all MEAD system subordinate systems to ensure that attendees of the ANCOC receive appropriate instruction. USAADASCH ANCOC institutional training requirements are TBD.

- Warrant Officer Technical Certification Course (WOTCC). USAADASCH will perform needs analyses to determine to what degree MEAD system training will be integrated into the WOTCC branch/specialty portion. Analyses will address the training requirements of MEAD system subordinate systems to ensure that attendees of the WOTCC receive appropriate instruction. USAADASCH WOTCC institutional training requirements are TBD.

- Senior Warrant Officer Training Course (SWOTC). USAADASCH will perform needs analyses to determine what degree MEAD system instruction will be integrated into the Senior Warrant Officer Training Course. USAADASCH SWOTC institutional training requirements are TBD.

- Officer Basic Course (OBC) (MEAD system Track). USAADASCH will perform needs analyses to determine to what degree MEAD system instruction will be integrated into the branch/specialty portion of OBC.

- Officer Advanced Course (OAC) (MEAD system Track). USAADASCH OAC institutional training requirements are TBD.

- Pre-Command Course. USAADASCH will perform needs analyses to determine to what degree MEAD system instruction will be integrated into the Pre-Command Course. USAADASCH Pre-Command training requirements are TBD.

- Reclassification training courses. MEAD system reclassification training will be conducted as required. USAADASCH reclassification training requirements are TBD.

c. Unit Training Strategy (WARFIGHTER)

The unit training device strategy is to teach collective tasks using Embedded Training (ET) capabilities, training devices, as well as simulations and simulators for sustainment training during tactical operations and joint training exercises. The initial effort to identify the unit training strategy for collective and sustainment training will be based on results of developmental testing and lessons learned. Analyses of this data will be used to determine the required amount of collective training necessary for unit proficiency and certification. Collective training includes DTT for crews and units to employ the system IAW doctrine and tactics. MEADS will interoperate with real world C^4I systems and simulators and simulation systems to train the unit. The MEAD system will be linked to a networked training capability (functional embedded training) with Army Battle Command Systems (ABCS) devices, to include the Global Command and Control System-Army (GCCS-A) and other C^4I devices. It should also link into the Family of Simulations (FAMSIM) training systems such as the Corps Battle System (CBS) and WARSIM 2000 for training, rehearsals and determining courses of action. Every effort should be made to leverage Synthetic Environment (SE) Core technologies to train and execute mission rehearsals in the SE and STOW environments. This will allow operators to maintain proficiency in tactical decision-making procedures and console operation procedures through air defense battle and DIS networks and HLA. The ET must be interoperable through the STOW architecture to link the live, virtual and constructive pieces of the training arena. The unit command will conduct collective training and unit qualification following NET. To assist in this training, all components of the training system will be available for use, to include the multimedia TSP left with the unit following NET, system embedded trainers, other training devices/products delivered with the system. NET products left with the units can be used to support sustainment and refresher training. CATS requirements will be supported by the units participating in scheduled, on-going, continuous unit training plans based on FM 100-25, ARTEP's, and MTP's. This training prepares ADA soldiers, leaders, and units to fight as members of the combined arms team and prepares them to execute the combined arms mission without additional training or lengthy training adjustment periods. CATS is--

- Battle-focused, derived from wartime missions, and based on approved doctrine.

- Performance-oriented and emphasizes hands-on practice in the skills and performance required for ADA soldiers and units to achieve and sustain proficiency on individual and collective tasks to established standards in accordance with METL, ARTEP/MTP, STP, and MQS/OFS.

- Sequential and progressive, and ADA soldiers must demonstrate performance to standards before passing through the training gate to the next higher level of training.

7. TRAINING PRODUCTS

A major part of the MEAD training subsystem is the system Training Support Package (TSP). It contains the full complement of training support products required to support training of the system in the institution, during NET, and in support of unit sustainment training. Wherever possible, the TSP components will employ ET capabilities, be multimedia based, and/or use distance learning technologies. The following is a summary of what is required for the MEAD system. The TADSS requirements to support institutional and unit training are listed below.

a. TADSS/ET (Detailed information concerning each TADSS is located at Annex H).

(1) Institution TADSS/ET Requirements

- Battle Management/Command, Control, Communications, Computers and Intelligence (BM/C^{4}I) element with the following Embedded Training capabilities:

  * On-Line Training Mode.
  * Off-Line Training Mode.
  * A Terrain Mapping Mode.

- MEADS Institutional Conduct of Fire Trainer (MICOFT) a TD supporting institutional training.

- MEAD system Sensor with Embedded Training capabilities.

- Missile Round Trainer (MRT)/Missile Round Pallet Trainer (MRPT).

- Launcher with Embedded Training capabilities.

- Explosive Ordnance Disposal Trainer (EODT).

(2) Unit TADSS/ET Requirements

Unit TADSS requirements envisioned for MEAD system is as follows:

- Battle Management/Command, Control, Communications, Computers, and Intelligence (BM/C^{4}I) element with the following Embedded Training capabilities:

    * On-Line Training Mode.
    * Off-Line Training Mode.
    * A Terrain Mapping Mode.

- MEAD system Sensor with Embedded Training capabilities.

- Missile Round Trainer (MRT)/Missile Round Pallet Trainer (MRPT).

- Launcher with Embedded Training capabilities.

(3) NET TADSS/ET Requirements

The NET training device requirement is to have ET and devices available during NET training. Specific training devices and ET capabilities are covered in the appropriate institutional and unit TADSS/ET paragraphs.

b. Multimedia Products.

Typical multimedia products that will be used to support MEAD system training are:

- Computer-Assisted Instruction (CAI)
- Computer-Based Training (CBT)
- Web-Based Training (WBT)
- Compact Disk-Read Only Memory (CD-ROM)
- Interactive Electronic Technical Manuals (IETM)

c. Manuals-the development of the MEAD system will require the development of the following:

- Mission Training Plans (MTPs)
- Soldiers Manuals (SMs)
- Field Manuals (FMs)
- Technical Manuals (TMs)
- Army Training and Evaluation Programs (ARTEPs)

d. System Hardware/Software

MEAD equipment hardware, software, and components to support institutional training will be based on a needs assessment. This assessment will determine the numbers and types of hardware, software, and components to be allocated for use in the service schools.

8. TRAINING SUPPORT

a. Distance Learning

MEADS will use state-of-the-art distance learning capabilities. Distance Learning (DL) provides the capability to enhance and sustain Total Army readiness by delivering standardized training to soldiers and units at the right place and time using multiple delivery means and techniques. It accomplishes this by leveraging technology and training design efficiencies to provide more cost effective and efficient training. Training sites, connectivity, software, hardware, and internet access capabilities must be considered. The most commonly used DL delivery techniques are:

- Correspondence Courses—Self-paced training materials that can be used for individual and collective training.

- Computer Based Instruction—Refers to course materials presented and controlled by a computer and which use multiple requirements for student responses as a primary means of facilitating learning. It is essentially individualized self-paced or group interactive instruction combined with multi-media presentations.

- Video Teletraining—provides the means to distribute training to any number of students simultaneously. Different methods of instruction may be used to present the training.

- Simulation—This is any representation or imitation of reality (abstract) and includes simulating part of a system, the operation of a system, and the environment in which the system will operate.

- Distributed Interactive Simulation—DIS is linking all types of unit training into the same network permitting wide-scale integration of various simulation systems and live training without regard to geographic limitations.

- Embedded Training Systems—ET provides the capability to train a soldier to standard using embedded training capabilities contained in operational equipment. The goal is that ET will be interoperable within a common operating environment linking geographically separated units in live, virtual, and constructive simulation. It

provides users assistance by embedded simulation, emulation or simulation capability, embedded connections between the prime system and the training system and training instrumentation.

b. Facilities

Existing training schools will be used where possible to support the MEAD system. Every attempt should be made to collocate schools at one location to share tactical equipment and training devices. MEAD classroom facilities must accommodate Classroom XXI requirements. The training facility to house the training devices and classrooms for MEAD training must conform to the MEAD training strategy. Ranges and maneuver areas must be sufficient in size to accommodate MEAD system deployment, operations and engagements. Required resources for facilities defined in paragraph five (5) of the MEAD ORD must be funded and/or provided by TRADOC/Project Office

c. Ammunition

The MEAD missile system will require targets for live fire exercises. Frequency of live fire exercises will be determined at some later date. The quantity and type of training ammunition has yet to be determined. MEAD system will use targets that are cost efficient and training effective. The targets should provide a realistic representation of the existing and projected threat; duplicate or replicate the time, movement, countermeasures, signatures (including number), exposure times, hit/kill indications; and provide a feedback/performance scoring capability. Targets should be environmentally nondestructive and support live and simulated missile firings.

d. Other

The need to conduct training with or at the Army's Combat Training Center (CTC) or Joint Readiness Centers (JRTC) will be determined at some future date. Every effort should be made to exercise MEAD system capabilities in a simulated and/or live environment.

9. POST-FIELDING TRAINING EFFECTIVENESS ANALYSIS (PFTEA)

As a minimum, a PFTEA will be conducted within 18-24 months of the MEAD system Initial operating Capability (IOC), subject to availability of resources, to assess efficiency and effectiveness of the total system training program after the completion of NET training when availability of resources permits.

TARGET AUDIENCE

COURSE MATRIX				
FUNCTIONAL AND PROFESSIONAL	ADASCH	OMMCS	SIGSCH	ENGSCH
14E (OFF)	X			
140E (WO)		X		
14E	X			
14J	X			
14T	X			
31F			X	
52D				X

ANNEX B
INSTITUTIONAL TRAINING

1. COURSE: 2-44-C20 (14E) ADA Officer Basic (MEAD TRACK) Course (OBC)

   TRAINING STRATEGY: This course prepares newly commissioned officers for their first duty assignment in an ADA unit. Training emphasizes leadership skills and the basic administrative and tactical skills officers will need to perform successfully in their assignments. OBC overall objective is to train officers to be platoon leaders, to accomplish the ADA mission, and to survive on the battlefield. Training includes a soldier environment, common core training in military writing, military history, map reading, logistics, combined arms, and NBC instruction. Branch-specific instruction will address topics pertaining to how to fight air defense artillery systems with the maneuver force at the ADA platoon level. During OBC, the student will attend the MEAD weapon qualifications track (14E). OBC is conducted in both peacetime and mobilization environments. Sustainment training will be accomplished through the use of system embedded training. Course length is TBD.

LOCATION: FORT BLISS, TEXAS

LESSON PLANS: TBD

COURSE START: ? QTR FY?

	FY?	FY?	FY?	FY?
CLASSES/YR				
STUDENT LOAD/YR				

TRAS DOCUMENT:
  ITP   TBD
  CAD TBD
  POI   TBD

TRAINING SUPPORT REQUIRED:

   a. Training start date and length of training will be developed based on experience learned from fielding MEADS.

2. COURSE: 4F-140E, MEAD System Technician Warrant Officer Basic.

TRAINING STRATEGY: This course will certify WO candidates or reclassified WOs in a related ADA maintenance MOS as MEAD missile system technicians. A revision of the course length is in compliance with the Warrant Officer Training System (WOTS) directive for the establishment of a separate POI for each proponent WO MOS. Training for the above course is designed to teach required skills and knowledge pertinent to the operation and unit maintenance of the MEAD system. Course length is TBD.

   Reinforcement and sustainment training will be accomplished for the ADA WO through system embedded training. MEAD missile system training is conducted in both peacetime and mobilization environments.

LOCATION: FORT BLISS, TEXAS

LESSON PLANS: TBD

COURSE START: TBD

	FY?	FY?	FY?	FY?
CLASSES/YR				
STUDENT LOAD/YR				

TRAS DOCUMENT:
  ITP   TBD
  CAD TBD
  POI   TBD

TRAINING SUPPORT REQUIRED:

   a. Training start date and length of training will be developed based on MEADS fielding lessons learned.

3. COURSE: 043-14E10, MEAD Fire Control Enhanced Operator Maintainer.

TRAINING STRATEGY FOR AIT: This course will qualify enlisted personnel as MEAD Fire Control Enhanced Operator Maintainer and MEAD system evaluator assistants by providing knowledge of the operation for the MEAD air defense missile system. Course length is TBD.

   a. Training for MOS 14E is designed and structured to provide the soldier with MEAD specific and professional skills, knowledge and principles. MEAD specific training will include all critical tasks associated with the operation, maintenance and employment of the MEAD missile system to include remove and replace and battle damage assessment and repair.

   b. Professional development training will provide the 14E NCO with the leadership skills necessary to train, supervise and lead subordinate personnel. Paramount in all USAADASCH instructional efforts is to train an ADA soldier to complete the assigned mission and survive in a battlefield environment.

LOCATION: FORT BLISS, TEXAS

LESSON PLANS: TBD

COURSE START: TBD

	FY?	FY?	FY?	FY?
CLASSES/YR				
STUDENT LOAD/YR				

TRAS DOCUMENT:
  ITP   TBD
  CAD TBD
  POI   TBD

TRAINING SUPPORT REQUIRED:

   a. Training start date and length of training will be developed based on MEADS fielding lessons learned.

4. COURSE: 043-14T10, MEAD Launching Station Enhanced Operator Maintainer

TRAINING STRATEGY FOR AIT: The course will provide initial entry training (IET) soldiers in the MOS skills required to perform duties of a MEAD Launching Station Enhanced Operator Maintainer. It will provide training in driving skills required for the MEAD launcher vehicle operations, hand signals, march order, and emplacement of MEAD system, related equipment operations, maintenance, orientation and alignment procedures and preventive maintenance. Training for MOS 14T is designed and structured to provide the soldier with MEAD specific and professional skills, knowledge, and principles. MEAD specific training will include all critical tasks associated with the operation, operator unit maintenance, and employment of the MEAD missile system. Course length is TBD.

LOCATION: FORT BLISS, TEXAS

LESSON PLANS: TBD

COURSE START: TBD

	FY?	FY?	FY?	FY?
CLASSES/YR				
STUDENT LOAD/YR				

TRAS DOCUMENT:
  ITP   TBD
  CAD TBD
  POI   TBD

TRAINING SUPPORT REQUIRED:

   a. Training start date and length of training will be developed based on MEADS fielding lessons learned.

5. COURSE: 043-14J10, AD C^{4}I TOC Enhanced Operator Maintainer

TRAINING STRATEGY: The course provides enlisted personnel the necessary electronic and digital training. Professional development training will provide the 14J NCO with the leadership skills necessary to train, supervise and lead subordinate personnel. Paramount in all instructional efforts is to train an USAADASCH soldier to complete the assigned mission and survive in a battlefield environment. . Course length is TBD.

LOCATION: FORT BLISS, TEXAS

LESSON PLANS: TBD

COURSE START: TBD

	FY?	FY?	FY?	FY?
CLASSES/YR				
STUDENT LOAD/YR				

TRAS DOCUMENT:
  ITP   TBD
  CAD TBD
  POI   TBD

TRAINING SUPPORT REQUIRED:

ANNEX C
UNIT/SUSTAINMENT TRAINING

UNIT/SUSTAINMENT TRAINING	REQUIREMENT CONTROL SYMBOL **ATTG-55**
REQUIREMENTS DETERMINATION AND ACQUISITION PROCESS	SYSTEM: MEDIUM EXTENDED AREA DEFENSE (MEAD) SYSTEM

1. INDIVIDUAL TRAINING

a. Strategy: Training for the MEAD system will be designed and structured to provide the soldier expertise in both weapon specific and professional development skills, knowledge and principles. Weapon specific training will include all tasks associated with operator maintainer tasks on each end item comprising the MEAD system. Professional development will provide the MEAD noncommissioned officer with the leadership skills necessary to train, supervise and lead subordinate personnel. Individual skills will be sustained by use of extension training material, devices and distributed training.

MOS	Training Event	Frequency
14E10	MOS Training	Weekly
14J10	MOS Training	Weekly
14T10	MOS Training	Weekly

b. Products required to sustain individual skills:

PRODUCT	DATE REQUIRED	RESOURCE DOCUMENTS	RESPONSIBLE AGENCY	SEE FIGURE C-2
ARTEP 44-XXX	FY ?	TRADOC 350-70	USAADASCH	
Soldiers Manuals	FY ?	TRADOC 350-70	USAADASCH	
Field Manuals	FY ?	TRADOC 25-30	USAADASCH	
Technical Manuals	FY ?	TBD	Materiel Developer	
Interactive Media Instruction (IMI)/Distance Learning	FY ?	TRADOC 350-70	USAADASCH	
Army Correspondence Course (ACCP)	FY ?	TRADOC 350-70	USAADASCH	
Crew Drills	FY?	TRADOC 350-70	USAADASCH	

2. COLLECTIVE TRAINING

a. Strategy: MTPs and drill books will incorporate the collective training required by battalion, battery, platoon, and crew. Collective training is supported by use of TADSS, embedded trainers, and training exercises as outlined in the MTPs. USAADASCH will develop training scenarios for play on embedded trainers and other training devices that will support all phases of collective training.

TRADOC FORM **568-R-E,** Aug 89   FIGURE C-1, UNIT/SUSTAINMENT
TRAININGUNIT/SUSTAINMENT TRAINING (page 1 of 2)

ECHELON	EVENT	FREQUENCY
Brigade	TBD	TBD
Battalion	TBD	TBD
Battery	TBD	TBD
Platoon	TBD	TBD

b. Products required to support collective skills:

PRODUCT	DATE REQUIRED	RESOURCE DOCUMENTS	RESPONSIBLE AGENCY	SEE FIGURE C-2
Crew Drills	FY ?	ORD	USAADASCH	
ARTEP	FY ?	TRADOC 350-70	USAADASCH	
TSOP	FY ?	FM 101-5	Unit	
Mission Training Plan (MTP)	FY ?	STRAP	USAADASCH	
Field Manuals	FY ?	STRAP	USAADASCH	
Site Equipment	FY ?	ORD/BOIP	NPO	

UNIQUE UNIT REQUIREMENTS MUST BE IDENTIFIED FOR SYSTEM FIELDING AND EMPLOYMENT

COMMENTS:

TRADOC FORM **568-R-E,** Aug 89   Figure C-2, Unit/Sustainment Training (page 2 of 2)

SYSTEM MILESTONE SCHEDULE - SHEET B (TRADOC REG 350-70)	PAGE 2 OF 13 PAGES	REQUIREMENTS CONTROL SYMBOL **ATTG-55**

SYSTEM: MEDIUM EXTENDED AIR DEFENSE (MEAD) SYSTEM	TRADOC SCHOOL: USAADASCH		AS OF DATE: 15 September 1997

COMPLETED BY: Mr. Hornbrook	OFFICE SYMBOL: ATSA-TPS	TELEPHONE: DSN 978-6104

TRAINING PACKAGE
ELEMENT/PRODUCT: INDIVIDUAL TRAINING

LEGEND:	MILESTONE BY QUARTER																		
	FY ?				FY ?				FY ?				FY ?				FY ?		
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
14E ADA OFFICER																			
140E ADA WARRANT OFFICER																			
14T LAUNCHER ENHANCED OPERATOR MAINTAINER																			
14E FIRE CONTROL ENHANCED OPERATOR MAINTAINER																			
14J AD C^{4}I TOC ENHANCED OPERATOR MAINTAINER																			

NOTES: Use one sheet for each Training Element or Product and use as many sheets as required for a complete list. See TRADOC Reg 350-70.

COMMENTS:
1. Initial Individual Training Plan (ITP) submitted.
2. Annotated Task List submitted.
3. Course Administrative Data (CAD) submitted.
4. Training Program Worksheet (TPW) submitted.
5. Individual Training Plan (ITP) completed and submitted.
6. Program Of Instruction (POI) submitted.
7. Resident Course start date.

TRADOC FORM **569-1-R-E**, Aug 89

SYSTEM MILESTONE SCHEDULE - SHEET B (TRADOC REG 350-70)		PAGE 3 OF 13 PAGES	REQUIREMENTS CONTROL SYMBOL **ATTG-55**

SYSTEM: MEDIUM EXTENDED AIR DEFENSE (MEAD) SYSTEM	TRADOC SCHOOL: USAADASCH	AS OF DATE: 15 September 1997

COMPLETED BY: Mr. Joe Janisheck	OFFICE SYMBOL: ATSA-DT-P	TELEPHONE: DSN 978-5900

TRAINING PACKAGE
ELEMENT/PRODUCT: ARMY CORRESPONDENCE COURSE PROGRAM (ACCP)

LEGEND:	MILESTONE BY QUARTER																			
	FY ?				FY ?				FY ?				FY ?				FY ?		
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
TBD																			

NOTES: Use one sheet for each Training Element or Product and use as many sheets as required for a complete list. See TRADOC Reg 350-70.

COMMENTS:
 1. Requirement identified and submitted for approval.
 2. Requirement approved by HQ TRADOC.
 3. Development initiated.
 4. Advanced breakdown sheets submitted.
 5. Camera ready mechanicals (CRM) submitted.
 6. Subcourse material ready for distribution.

TRADOC FORM **569-1**

| SYSTEM MILESTONE SCHEDULE - SHEET B (TRADOC REG 350-70) | | | | | | | | | | | | | | | PAGE 4 OF 13 PAGES | | | REQUIREMENTS CONTROL SYMBOL **ATTG-55** | |

| SYSTEM: MEDIUM EXTENDED AIR DEFENSE (MEAD) SYSTEM | TRADOC SCHOOL: USAADASCH | AS OF DATE: 15 September 1997 |

| COMPLETED BY: Mr. Denham | | OFFICE SYMBOL: ATSA-TAC-D | TELEPHONE: DSN 978-0766 |

TRAINING PACKAGE
ELEMENT/PRODUCT: ARMYWIDE TRAINING LITERATURE PROGRAM

LEGEND:	MILESTONE BY QUARTER																		
	FY ?				FY ?				FY ?				FY ?				FY ?		
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
FM 44-XX MEAD Battalion and Battery Operations																			

NOTES: Use one sheet for each Training Element or Product and use as many sheets as required for a complete list. See TRADOC Reg 350-70.

COMMENTS:
1. Requirements identified.
2. Draft Army Training Literature Program (ATLP) changes validated.
3. Field Manual (FM) outlines approved.
4. FM Coordinating Draft completed.
5. Print request initiated (final draft print).
6. Approved CRM copies and comprehensive dummy submitted.
7. Printing and distribution completed.

TRADOC FORM **569-1-R-E**, Aug 89

SYSTEM MILESTONE SCHEDULE - SHEET B (TRADOC REG 350-70)								PAGE 5 OF 13 PAGES					REQUIREMENTS CONTROL SYMBOL **ATTG-55**						

SYSTEM: MEDIUM EXTENDED AIRDEFENSE (MEAD) SYSTEM								TRADOC SCHOOL: USAADASCH					AS OF DATE: 15 September 1997						

COMPLETED BY: Mr. Hornbrook													OFFICE SYMBOL: ATSA-DT-P			TELEPHONE: DSN 978-6049/5129			

TRAINING PACKAGE
ELEMENT/PRODUCT: SOLDIER'S TRAINING PUBLICATIONS.

LEGEND:	MILESTONE BY QUARTER																		
	FY ?				FY ?				FY ?				FY ?				FY ?		
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
STP 44-14E1-SM (Chap 3)																			
STP 44-14T1-SM (Chap3)																			
STP 44-14E25-SM-TG (Chap 4)																			
STP 44-14T25-SM-TG (Chap 4)																			
STP 44-14E1-SM																			
STP 44-14T1-SM																			
STP 44-14E25-SM-TG																			
STP 44-14T25-SM-TG																			

NOTES: Use one sheet for each Training Element or Product and use as many sheets as required for a complete list. See TRADOC Reg 350-70.

COMMENTS:
1. Analysis completed.
2. Draft SM/TG/ARTEP submitted.
3. ATSC staffing.
4. CRM submitted.
5. Distribution completed.

TRADOC FORM **569-1**

SYSTEM MILESTONE SCHEDULE - SHEET B (TRADOC REG 350-70)		PAGE 6 OF 13 PAGES	REQUIREMENTS CONTROL SYMBOL **ATTG-55**

SYSTEM: MEDIUM EXTENDED AIR DEFENSE (MEAD) SYSTEM	TRADOC SCHOOL: USAADASCH	AS OF DATE: 15 September 1997

COMPLETED BY: Mr. Janisheck	OFFICE SYMBOL: ATSA-DT	TELEPHONE: DSN 978-5900

TRAINING PACKAGE
ELEMENT/PRODUCT: TRAINING AIDS, DEVICES, SIMULATIONS, AND SIMULATORS (TADSS)

LEGEND:	MILESTONE BY QUARTER																		
	FY ?				FY ?				FY ?				FY ?				FY ?		
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
Tactical Operations Center (TOC) Embeded Training (ET)																			
Institutional Maintenance Trainer (IMT)																			
Explosive Ordnance Disposal Trainer (EODT)																			
Tactical Operations Center Trainer (TOCT)																			
Missile Round Trainer/Missile Round Pallet (MRT/MRP)																			
Sensor Embeded Training (ET)																			
Launcher Embeded Training (ET)																			

NOTES: Use one sheet for each Training Element or Product and use as many sheets as required for a complete list. See TRADOC Reg 350-70.

COMMENTS:
1. High risk, hard-to-train tasks identified.
2. TADSS concept validated.
3. Need for TADSS validated.
4. TADSS incorporated into STRAP.
5. Analytical justification via TEA.
6. Training ORD developed if required.
7. TADSS effectiveness validated.
8. TADSS incorporated into the Operational Requirements Document (ORD).
9. MOS specific milestones/requirements for TADSS developed and incorporated in ITS.

TRADOC FORM **569-1-R-E**, Aug 89

SYSTEM:		TRADOC SCHOOL:	AS OF DATE:
MEDIUM EXTENDED AIR DEFENSE (MEAD) SYSTEM		USAADASCH	15 September 1997

COMPLETED BY:	OFFICE SYMBOL:	TELEPHONE:
	ATSA-DT	

TRAINING PACKAGE
ELEMENT/PRODUCT: DA AUDIOVISUAL PRODUCTION PROGRAM (DAAPP)

LEGEND:	MILESTONE BY QUARTER																			
	FY ?				FY ?				FY ?				FY ?				FY ?			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	
TBD																				

NOTES: Use one sheet for each Training Element or Product and use as many sheets as required for a complete list. See TRADOC Reg 350-70.

COMMENTS:
1. High risk tasks and jobs identified.
2. Validated in storyboard format.
3. DAAPP requirements submitted to ATSC.
4. Requirements approved by DA.
5. Production initiated.
6. Distribution completed.

TRADOC FORM **569-1**

SYSTEM MILESTONE SCHEDULE - SHEET B (TRADOC REG 350-70)	PAGE 8 OF 13 PAGES	REQUIREMENTS CONTROL SYMBOL **ATTG-55**

SYSTEM: MEDIUM EXTENDED AIR DEFENSE (MEAD) SYSTEM	TRADOC SCHOOL: USAADASCH		AS OF DATE: 15 September 1997

COMPLETED BY: Mr. Janisheck		OFFICE SYMBOL: ATSA-DT	TELEPHONE: DSN 978-5900

TRAINING PACKAGE ELEMENT/PRODUCT:

FACILITIES

LEGEND:	MILESTONE BY QUARTER																		
	FY ?				FY ?				FY ?				FY ?				FY ?		
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
MEAD Training Facility (TBD)																			

NOTES: Use one sheet for each Training Element or Product and use as many sheets as required for a complete list. See TRADOC Reg 350-70.

COMMENTS:
1. Range and facility requirements identified.
2. Construction requirements submitted to MACOM.
3. Development or construction requirements completed.
4. Requirements validated and updated.
5. Supportive developments/requirements identified and availability coordinated.
6. Installation and other construction requirements submitted to MACOM.
7. Refined construction requirements and range criteria forwarded to MACOM.
8. Construction initiated.

TRADOC FORM **569-1-R-E**, Aug 8

| SYSTEM: MEDIUM EXTENDED AIR DEFENSE (MEAD) SYSTEM | TRADOC SCHOOL: USAADASCH | AS OF DATE: 15 September 1997 |
| COMPLETED BY: 6th ADA Brigade | OFFICE SYMBOL: ATSA-DT | TELEPHONE: |

TRAINING PACKAGE ELEMENT/PRODUCT: TRAINING AMMUNITION

LEGEND:	MILESTONE BY QUARTER																		
	FY ?				FY ?				FY ?				FY ?				FY ?		
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
Course 2-44-C20 (14E) ADA Officer Basic MEAD Track (OBC)																			
Course 4F-140E Patriot/MEAD System Technician WO Basic																			
Course 632-14E10 Patriot/MEAD Fire Control Enhanced Operator/Maintainer																			
Course 043-14T10 Patriot/MEAD Launching Station Enhanced Operator/Maintainer																			
Course 121-27X 2/3/4 Patriot/MEAD System Repairer Phase I/II																			

NOTES: Use one sheet for each Training Element or Product and use as many sheets as required for a complete list. See TRADOC Reg 350-70.

COMMENTS:
1. Ammununition identified.
2. Tentative validation of ammunition requirements.
3. Requirements included in ORD.
4. Ammunition item developed.
5. Validatio and test complete.
6. Ammunition requirements in ITP.
7. Requirements provided to appropriate installation/MACOM manager.
8. Requirements included in DA PAM 350-38.
9. Production.

TRADOC FORM **569-1**

SYSTEM MILESTONE SCHEDULE - SHEET B (TRADOC REG 350-70)		PAGE 10 OF 13 PAGES	REQUIREMENTS CONTROL SYMBOL ATTG-55

SYSTEM: MEDIUM EXTENDED AIR DEFENSE (MEAD) SYSTEM	TRADOC SCHOOL: USAADASCH	AS OF DATE: 15 September 1997

COMPLETED BY:		OFFICE SYMBOL:	TELEPHONE:

TRAINING PACKAGE
ELEMENT/PRODUCT: NEW EQUIPMENT TRAINING PRODUCTS

LEGEND:	MILESTONE BY QUARTER																		
	FY ?				FY ?				FY ?				FY ?				FY ?		
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
TBD																			

NOTES: Use one sheet for each Training Element or Product and use as many sheets as required for a complete list. See TRADOC Reg 350-70.

COMMENTS:
1. Staff planner course developed by AMC.
2. Technical training courses for testing.
3. Technical training courses for instructors and key personnel.
4. DTT identified.

TRADOC FORM 569-1-R-E, Aug 89

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SYSTEM MILESTONE SCHEDULE - SHEET B (TRADOC REG 350-70)		REQUIREMENTS CONTROL SYMBOL **ATTG-55**

SYSTEM: MEDIUM EXTENDED AIR DEFENSE (MEAD) SYSTEM	TRADOC SCHOOL: USAADASCH	AS OF DATE: 15 September 1997

COMPLETED BY: Mr. Denham (MTP) /Mr. Hornbrook (Drills)		OFFICE SYMBOL: ATSA-TAC-N	TELEPHONE: 979-5129.6049

TRAINING PACKAGE ELEMENT/PRODUCT: COLLECTIVE TRAINING (CT) AND ARMY TRAINING EVALUATION PROGRAM/MISSION TRAINING PLAN (ARTEP/MTP)

LEGEND:	MILESTONE BY QUARTER																			
	FY ?				FY ?				FY ?				FY ?				FY ?		
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
ARTEP 44-695-MTP																			
ARTEP 44-695-10 Drill																			
ARTEP 44-695-11 Drill																			
ARTEP 44-695-12 Drill																			

NOTES: Use one sheet for each Training Element or Product and use as many sheets as required for a complete list. See TRADOC Reg 350-70.

COMMENTS:

1. Annotated task list completed and submitted (draft).
2. Draft collective training (CT) concept proposed.
3. CT package foe combat critical collective tasks for testing prepared.
4. Test edition ARTEP/CT support package distributed.
5. Test edition ARTEP/CT evaluated.
6. Coordinating draft ARTEP staffed.
7. ARTEP distributed.

TRADOC FORM **569-1**

SYSTEM MILESTONE SCHEDULE - SHEET B (TRADOC REG 350-70)									PAGE 12 OF 13 PAGES				REQUIREMENTS CONTROL SYMBOL **ATTG-55**					

| SYSTEM:
MEDIUM EXTENDED AIR DEFENSE (MEAD) SYSTEM | | | | | | | | | TRADOC SCHOOL:
USAADASCH | | | | AS OF DATE:
15 September 1997 | | | | | |

| COMPLETED BY:
Mr. Joe Janisheck | | | | | | | | | | | | OFFICE SYMBOL:
ATSA-DT | | | TELEPHONE:
DSN 978-5900 | | | |

TRAINING PACKAGE ELEMENT/PRODUCT: COST AND TRAINING EFFECTIVENESS ANALYSIS (CTEA)

LEGEND:						MILESTONE BY QUARTER												
						FY ?				FY ?				FY /				FY ?
						1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q
MEAD CTEA																		

NOTES: Use one sheet for each Training Element or Product and use as many sheets as required for a complete list. See TRADOC Reg 350-70.

COMMENTS:
1. CTEA developed.
2. CTEA incorporated into COEA.
3. CTEA data to contractors and training conducting the analysis.
4. CTEA updated using results of operational testing.
5. CTEA finalized.

TRADOC FORM **569-1-R-E**, Aug 89

SYSTEM MILESTONE SCHEDULE - SHEET B (TRADOC REG 350-70)		PAGE 13 OF 13 PAGES	REQUIREMENTS CONTROL SYMBOL **ATTG-55**

SYSTEM: MEDIUM EXTENDED AIR DEFENSE (MEAD) SYSTEM	TRADOC SCHOOL: USAADASCH		AS OF DATE: 15 September 1997

COMPLETED BY: Mr. Joe Janisheck		OFFICE SYMBOL: ATSA-DT	TELEPHONE: DSN 978-5900

TRAINING PACKAGE ELEMENT/PRODUCT: INTERACTIVE MEDIA INSTRUCTION (IMI)/DISTANCE LEARNING

LEGEND:	MILESTONE BY QUARTER																		
	FY				FY				FY				FY				FY		
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
TBD																			

NOTES: Use one sheet for each Training Element or Product and use as many sheets as required for a complete list. See TRADOC Reg 350-70.

COMMENTS:
1. Requirements identified and submitted for approval.
2. Requirements approved by ATSC and TRADOC.
3. Identify resources.
4. Develop and validate courseware.
5. Master materials to ATSC for replication and distribution.
6. Replication and distribution completed.

TRADOC FORM **569-1**

SYSTEM MILESTONE SCHEDULEMILESTONE SCHEDULE-SHEET A		PAGE 1 OF 1 3 PAGES		REQUIREMENTS CONTROL SYMBOL **ATTG-55**
SYSTEM: MEDIUM EXTENDED AIR DEFENSE (MEAD)		**DA CATEGORY: MAJOR**	**OFFICE SYMBOL ATSA-DT**	AS OF DATE 15 Sep 1997
POINTS OF CONTACT		**NAME**	**OFFICE SYMBOL**	**TELEPHONE**
MATERIAL COMMAND				
TRADOC PROPONENT				
TSM:		Mr. Olsen	ATSA-TSM-TMD	DSN 978-6041
CD:		Cpt Vasquez	ATSA-CDM-T	DSN 978-5713
TD:		Mr. Joe Janisheck	ATSA-DTM	DSN 978-5900
ASSOC SCHOOLS:		USAOMMCS	ATSK-THP	DSN 978-7188
CD:		Mr. Saxon	CASCOM	DSN 734-0268
TD:		CW4 Emmanuel	ATSK-TX	DSN 788-6883

ITEM	DATE	RESPONSIBLE AGENCY/POC	TELEPHONE
MNS:	TBD	USAADASCH, DCD, Cpt Vasquez	DSN 978-4735
SMMP:	TBD	USAADASCH, DCD, Cpt Vasquez	DSN 978-4735
ORD:	TBD	USAADASCH, DCD, Cpt Vasquez	DSN 978-4735
ILSMP:	TBD	USAADASCH, DCD, Cpt Vasquez	DSN 978-4735
TTSP:	TBD	USAADASCH, CATD, Mr. Denham	DSN 978-0667
QQPRI:			
BOIP:			

NETP:	TBD	MICOM,	DSN 746-5956
STRAP:	TBD	USAADSCH, DTM, Mr. Joe Janisheck	DSN 978-5900

TRADOC FORM **569-R-E,** Aug 89

ANNEX E
REFERENCESOF REFERENCES

TITLE	DATE
MEDIUM EXTENDED AIR DEFENSE SYSTEM SUPPORTABILITY STRATEGY	SEP 97
SYSTEM MANPRINT MANAGEMENT PLAN (CORPSAM)	JAN 93
OPERATIONAL REQUIREMENT DOCUMENT (S) (DRAFT)	DEC 97
TEST AND EVALUATION MASTER PLAN (TEMP) (S) REVISION G (CORPSAM)	MAR 93
TRAINING IMPACT ANALYSIS (CORPSAM)	DEC 91

ANNEX F
COORDINATION SUMMARYSUMMARY

SYSTEM: MEAD			DATE: 15 Sep 1997
	COMMENTS		
AGENCY	SUBMITTED	ACCEPTED	RATIONALE FOR NON-ACCOMMODATION
United States Army Air Defense Artillery School Combined Arms and Tactics Department			
United States Army Air Defense Artillery School, Office, Chief of Air Defense Artillery			
United States Army Air Defense Artillery School, Combat Developments			
TRADOC System Manager - MEAD			
National Project Office - MEAD			
USATC			
USA Engineer School			
USA Signal School			

ANNEX G
ACRONYMNS

AC	Active Component
ACCP	Army Correspondence Course Program
ADA	Air Defense Artillery
ADCATT	Air Defense Combined Arms Tactical Training
AIT	Advanced Individual Training
AMC	United States Army Materiel Command
AMIM	Army Modernization Information Memorandum
AOC	Area of Concentration
AR	Army Regulation
ARTEP	Army Training and Evaluation Program
ASI	Additional Skills Identifier
ATLP	Army Training Literature Program
ATP	Acceptance Test Procedure
ATSC	Army Training Support Center
BLT	Branch Liaison Team
BM/C^{4}I Intelligence	Battle Management/Command, Control, Communications, Computers and
BOIP	Basis of Issue Plan
C^3	Command, Control and Communications
C^{3}I	CAD Course Administrative Data
CATS	Combined Arms Training Strategy
CD	Combat Development
CFX	Command Field Exercise
CMT	Command Military Training

COEA	Cost and Operational Effectiveness Analysis
COFT	Conduct of Fire Trainer
CONUS	Continental United States
CPX	Command Post Exercise
CRC	Camera Ready Copies
CRM	Camera Ready Mechanicals
CRMP	Computer Resource Management Plan
CTC	Combat Training Center
CTEA	Cost and Training Effectiveness Analysis
CTLS	Critical Task List
CTT	Common Task Training
CTX	Combined Training Exercise
DA	Department of the Army
DAAPP	Department of the Army Audio Visual Production Program
DAC	Department of the Army Civilian
DAM	Display Aided Maintenance
DCD	Directorate of Combat Developments
DEH	Directorate of Engineering and Housing
DEPEX	Deployment Exercise
DIS	Distributed Interactive Simulation
DTT	Doctrine and Tactics Training
EOD	Explosive Ordnance Disposal
EODT	Explosive Ordnance Disposal Trainer
EXEVAL	External Evaluation
FEA	Front End Analysis

FCX	Fire Coordination Exercise
FM	Field Manual
FOE	Follow-On Evaluation
FTX	Field Training Exercise
FUE	First Unit Equipped
FY	Fiscal Year
GPALS	Global Protection Against Limited Strike
HATMD	High Altitude Theater Missile Defense
HE	Human Engineering
I&KP	Instructor and Key Personnel
IAW	In Accordance With
IAC	Interactive Courseware
ICOFT	Institutional Conduct of Fire Trainer
ILSMT	Integrated Logistics Support Management Team
ILSP	Integrated Logistics Support Plan
IMT	Institutional Maintenance Trainer
IPR	In Process Review
ITP	Individual Training Plan
ITS	Integrated Training Schedule
JTX	Joint Training Exercise
LCSMM	Life Cycle System Management Model
LOGEX	Logistical Exercise
LRU	Line Replaceable Unit
LSA	Logistics Support Analysis
LTA	Local Training Area

MACOM	Major Army Command
MANPRINT	Manpower and Personnel Integration
MAPEX	Map Exercise
MATDEV	Materiel Developer
METL	Mission Essential Task List
MIL-STD	Military Standard
MNS	Mission Needs Statement
MOS	Military Occupational Specialty
MPTR	Multipurpose Training Range
MQS	Military Qualifications Standards
MQSM	Military Qualification Standard Manual
MRT	Missile Round Trainer
MT	Maintenance Trainer
MTP	Mission Training Plan
NBC	Nuclear, Biological and Chemical
NET	New Equipment Training
NETP	New Equipment Training Plan
NETT	New Equipment Training Team
NMIBT	New Materiel Information Briefing Team
OBC	Officer Basic Course
OCADA	Office, Chief of Air Defense Artillery
OCONUS	Outside of Continental United States
OPTEMPO	Operating Tempo
ORD	Operational Requirements Document
ORE	Operational Readiness Exercise

OSHA	Occupational Safety and Health Administration/Act
OTRS	Operational Test Readiness Statement
PATRIOT	Phased Array Tracking Radar to Intercept of Target
PCC	Pre-Command Course
PFTEA	Post Field Training Effectiveness Analysis
PLT	Procurement Lead Time
PM	Program Manager
PMCS	Preventive Maintenance Checks and Services
POI	Program of Instruction
PPBES	Program Planning, Budgeting and Execution System
QQPRI	Qualitative and Quantitative Personnel Requirements Information
RC	Reserve Component
RDD	Required Delivery Date
RE	Readiness Exercise
RSP	Render Safe Procedures
SAT	Systems Approach to Training
SM	Soldiers Manual
SME	Subject Matter Expert
SMMP	System Manprint Management Plan
SSI	Sensor System Interface/Special Skill Identifier
STAFFEX	Staff Exercise
STP	Soldier Training Publication
STRAC	Standards in Training Commission
STRAP	System Training Plan
STOW	Synthetic Theater of War

STX	Situational Training Exercise
SWOC	Senior Warrant Officer Course
TAD	Target Audience Description
TADSS	Training Aids, Devices, Simulations and Simulators
TBD	To Be Determined
TD	Training Development
TDNS	Training Device Needs Statement
TDR	Training Device Requirement
TDS	Training Development Study
TEMP	Training and Evaluation Master Plan
TEWT	Tactical Exercise Without Troops
TG	Trainers Guide
THAAD	Theater High Altitude Area Defense
TIA	Training Impact Analysis
TMD	Theater Missile Defense
TOC	Tactical Operations Center
TPT	Troop Proficiency Trainer
TPW	Training Program Worksheet
TRAC	TRADOC Analysis Command
TRADOC	Training and Doctrine Command
TRAS	Training Requirement Analysis System
TSM	TRADOC System Manager
TTCP	Training Test Certification Plan
TTSP	Training Test Support Package
UCOFT	Unit Conduct of Fire Trainer

UMT   Unit Maintenance Trainer

USAADASCH   United States Army Air Defense Artillery School

USAOMMCS   United States Army Ordnance Missile and Munitions Center and School

USASDC   United States Army Strategic Defense Command

USATSC   United States Army Training Support Center

VEDS   Virtual Environment Display System

WOTCC   Warrant Officer Technical Certification Course

ANNEX H
TADSS/ET

a.   **Purpose**

The TADSS/ET annex provides a detailed description of TADSS/ET requirements necessary to support training for NET, the institution, the unit and CATS. It is important to note that wherever and whenever possible ET capabilities will be used. The focus of this strategy is to ensure training can be accomplished at unit locations in real-time without relying heavily on the institutional training base. Units will have the capability to train tasks necessary to ensure skills and proficiencies match operational requirements. The MEAD system will be linked to a networked training capability (functional embedded training) with Army Battle Command Systems (ABCS) devices, to include the Global Command and Control System-Army (GCCS-A) and other C^4I devices. It should also link into the Family of Simulations (FAMSIM) training systems such as the Corps Battle System (CBS) and WARSIM 2000 for training, rehearsals and determining courses of action. Every effort should be made to leverage Synthetic Environment (SE) Core technologies to train and execute mission rehearsals in the SE and STOW environments. The NET training device requirement is to have system TADSS/ET available during NET training. Specific training devices and ET capabilities are covered in the appropriate TADSS paragraphs.

b.   **Overview**

The following chart summarizes each TADSS/ET requirement for the MEAD system. It depicts where the TADSS/ET requirements are to be located and the training arena supported. This chart is not intended to limit use of TADSS/ET but to present in chart format where TADSS/ET are envisioned to be used. These locations may change based on operational needs and future analysis to be performed. The amounts (#) of devices is determined based on student loads, instructor/student ratios, media of instruction and Army needs. TADSS/ET will as a minimum be required at the locations indicated on this chart. The number of Battalions, Battery's, and Firing units has not yet been defined. The amounts will be added to this STRAP as soon as the information is available.

Training Aids, Devices, Simulations, and Simulators (TADSS) Requirements for the MEAD System			
TADSS EQUIPMENT			
PURPOSE/FUNCTION	*NET*	*INSTITUTION*	*UNIT*
MEADS Institutional Conduct Of Fire Trainer (MICOFT)			
• Crew Operations	X	X	
• Operator Maintainer Functions	X	X	
• Engagement Operations	X	X	
• Force Operations	X	X	
• BM/C^4I Operations	X	X	
• Evaluation Function	X	X	
• CATS	X	X	

1

Missile Round Trainer (MRT)/Missile Round Pallet Trainer (MRPT)			
• Crew Operations	X	X	X
• Operator Functions	X	X	X
Explosive Ordnance Disposal Trainer (EODT)			
• Render Safe Procedure Operations	X	X	
• Evaluation Function	X	X	

TACTICAL EQUIPMENT WITH EMBEDDED TRAINING CAPABILITY

PURPOSE/FUNCTION	NET	INSTITUTION	UNIT
Battle Management/Command, Control, Communications, Computer, and Intelligence (BM/C^{4}I) Element			
• Crew Operations	X	X	X
• Operator Maintainer Functions	X	X	X
• Engagement Operations	X	X	X
• Force Operations	X	X	X
• BM/C^{4}I Operations	X	X	X
• Evaluation Function	X	X	X
• CATS	X	X	X
MEAD System Sensor (s)			
• Crew Operations	X	X	X
• Operator Maintainer Functions	X	X	X
• Engagement Operations	X	X	X
• Detection Function	X	X	X
• Acquisition Function	X	X	X
• Identification Function	X	X	X
• Tracking Function	X	X	X
• Evaluation Function	X	X	X
• CATS	X	X	X
MEAD System Launcher			
• Crew Operations	X	X	X
• Operator Maintainer Functions	X	X	X
• Engagement Operations	X	X	X
• Launch Operations	X	X	X
• Re-load Operations	X	X	X
• Evaluation Function	X	X	X
• CATS	X	X	X

a. **TADSS Strategy**

The following paragraphs explain in detail what are the necessary TADSS capabilities to support MEAD system training. It is important to note that embedded training capabilities will be used whenever and wherever possible. Since things change during the Life Cycle Development and Procurement it is envisioned that the TADSS requirements explained here provide the best estimate to date.

(1) MEADS Institutional Conduct Of Fire Trainer (MICOFT)

The MICOFT will be software driven device used to train individual, collective and sustainment training of engagement operations, force operations, and operator maintenance tasks at the institution and will be designed for use in an indoor environment. All tasks and sub-tasks trained on the MICOFT must be directly transferable to the tactical system. The trainer will utilize tactical software and interface with simulated inputs for operator training. The MICOFT will interface, real time, with other Army Tactical Command and Control Systems for Combined Arms Training. The design of the MICOFT will allow the instructor to control and monitor the performance of all actions such as, performance of all operator and supervisory tasks related to system displays and controls, initialization, terrain mapping, automatic and semiautomatic tactical operations, BM/C^{4}I operations and data processing system procedures. The MICOFT will provide immediate feedback to the student and compile data for the training developers. The MICOFT will utilize the diagnostic programs developed for the tactical equipment and provide simulated faults to allow the operator to develop/sustain the skills necessary to perform operator maintenance tasks. The MICOFT will allow the operator to fault isolate malfunctions using Interactive Electronic Technical Manuals (IETM) and BIT/BITE maintenance procedures to a Line Replaceable Unit (LRU), and allow removal and replacement procedures to be performed.

(2) Missile Round Trainer (MRT)/Missile Round Pallet Trainer (MRPT)

A MEAD system MRT/MRPT with the same external and internal characteristics that simulates the weight, balance and physical characteristics of the missile/pallet will be used to train load, reload, missile handling/transporting procedures, and Render Safe Procedures (RSP) at the institution and unit. The MRT/MRPT will support full and partial reload training. All tasks and sub-tasks trained on the MRT must be capable of being directly transferable to the tactical system.

(3) Explosive Ordnance Disposal Trainer (EODT)

The EODT personnel will use this device to support institutional training. It will have the same external and internal configuration as a MEAD tactical missile. This device will be used to train EOD personnel in the recognition of inherent hazards associated with the components of the tactical missile and allow them to teach and perform the approved Render Safe Procedures (RSP) that are used when a tactical missile is involved in an incident/accident. A classroom cut away missile will be used to train personnel in the handling and applications of the RSP for the MEAD system missile. All tasks and sub-tasks trained on the EODT must be capable of being directly transferable to the tactical missile.

b.   **Data Sources**

No Training Impact Analysis (TIA) has been performed on the MEAD system. No Cost and Training Effectiveness Analysis has been performed on the MEAD system. The Logistics Support Analysis (LSA) now called the Sustainment and Supportability Analysis is currently out in draft form. The training proponent is working task issues currently and will provide data as soon as it's available.

c. TADSS Type

Gunnery	Maneuver
Embedded Training Software	**Embedded Training Hardware**
	MEADS Conduct Of Fire Trainer (MICOFT)
Networked Simulator or Simulation	**Force-On-Force**
Distance Learning Capability	**Synthetic Theater Of War (STOW)**
Computer-Based Training (CBT)	**Web-Based Training (WBT)**
Higher Level Architecture (HLA)	**Interactive Electronic Technical Manuals (IETM)**
Interactive CD ROM Capability (operator, maintainer, crew, and sustainment training)	

f. Embedded Training

(1) Battle Management/Command, Control, Communications, Computers and Intelligence (BM/C^{4}I) element.

The MEAD system BM/C^{4}I will have built-in ET capabilities that support sustainment training and will utilize a scenario and fault generation system at the institution and units. The capability to develop scenarios at the unit is required for unit operator maintainer and crew training to support operational needs. This system will make maximum use of state-of-the art artificial intelligence and cognitive sciences to develop the tactical scenarios and simulated equipment faults used for initial and sustainment training. The system must be capable of transmitting and receiving tactical scenarios and simulating equipment faults to institutional, unit, and embedded trainers without interrupting tactical operations or training. It must provide design capabilities of all Air Defense Design scenarios for unit or integrated-netted operations simulating other ADA elements. These scenarios will have an unlimited number of targets and support the inclusion of an unlimited number of randomly selected system faults. It must provide terrain simulations and scenario pre-view and editing capabilities. It will also provide design capabilities for maintenance and diagnostic scenarios. The maintenance scenarios will have an unlimited number of simulated faults. The system must be capable of easily updating existing scenarios in the event of major software changes and must provide modification software able to modify threats to meet theater specific mission needs. The system must contain explicit training validation measurement software able to measure a top-down integration training system and integrated programs directed toward the development, implementation and validation of training objectives, training strategies and training effectiveness. To "train as we fight" the $^{BM/C4I}$ must support design and validation of integrated mission scenarios and its software must support synchronization with multiple weapon systems. It must link task performance training effectiveness measurements to mission performance and unit readiness measurements. The trainers, training evaluators and training developers must easily interpret the output from data reduction software. The system must emulate combat conditions through battle simulations,

situational training exercises or air defense battle simulations and threat-oriented scenarios. The scenarios must be easily modified. The software must be adaptable to changes in the top-down integrated systems interfaces, expected wartime conditions and changes in command tactics and doctrine. The BM/C^{4}I must have an ET capability and contain the following modes:

- **On Line Training Mode**. The ET must have the capability for the user in the field to design target sets to fly against his own database. Various target sets must be created and stored on the mass storage unit (MSU). The trainer must be able to change or input an unlimited number of targets.

- **Off Line Training Mode**. The ET must have the capability to load and execute air defense tactical scenarios generated off line for unit or integrated-netted operations. It must also include software to execute maintenance and diagnostic scenarios. The air defense battle-focused scenarios capable of simulating other ADA elements of the supported force must have an unlimited number of targets and must support the inclusion of an unlimited number of simulated equipment faults. The maintenance and diagnostic scenarios must include an unlimited number of system faults. The system must interface with tactical scenarios designed in a top-down integrated training system approach and provide software to validate training strategies and related training processes for the Corps and subordinate units. It must integrate and validate performance tests design to measure overall operator and unit training standards and effectiveness. This feature must allow the recording of actual missions that can be played back later for operator and tactical training.

- **A Terrain Mapping Mode**. The ET must have the capability for the user in the field to record live radar-produced terrain masking during tactical deployment.

(2) MEAD System Sensor(s)

The MEAD system sensor's ET capability for institution and unit operator maintainer sustainment training is required for use when the MEAD system are tactically deployed. ET will provide immediate feedback to students and compile data for the training developers. The trainer will utilize the diagnostic programs developed for the tactical equipment and provide simulated faults to allow the operator maintainer to develop/sustain the skills necessary to perform operator maintainer tasks. ET must allow the operator to fault isolate malfunctions using electronic technical manuals and BIT/BITE maintenance procedures to a Line Replaceable Unit (LRU), and allow removal and replacement procedures to be performed.

(3) MEAD System Launcher

The launcher must have an ET capability that is software driven and used to train individual and collective operator maintainer skills at the institution and unit. All tasks and sub-tasks trained on the launcher must be capable of being directly transferable to the tactical system. The design of the launcher will allow the instructor to control and monitor the performance of all actions. The launcher will be designed to allow the performance of all operator maintainer tasks related to emplacement, site initialization, march order, load, reload and missile handling and transporting procedures. The launcher will provide immediate feedback to students and compile data for the training developers. The launcher will utilize diagnostic programs and provide simulated faults to allow the operator maintainer to develop and sustain the skills. The launcher will allow the operator maintainer to fault isolate malfunctions using electronic technical manuals

and BIT/BITE maintenance procedures to a Line Replaceable Unit (LRU), and allow removal and replacement procedures to be performed.